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EXAMINER	
ZHENG, JACKY X	
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2625	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/604,200	ESCHBACH ET AL.	
	Examiner	Art Unit	
	Jacky X. Zheng	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *June 30, 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *June 30, 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/30/03, 10/27/03 & 3/21/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is the initial office action based on the application filed on June 30, 2003.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on June 30, 2003, October 27, 2003 and March 23, 2006 were filed on and after the mailing date of the application on June 30, 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

3. In addition, the information disclosure statement (IDS) submitted on October 27, 2003, "Document 1" cited a co-pending application 10/604,201. The corresponding publication of the application with Publication No. 2004/0264771 is cited and considered.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. **Claims 1-42** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-42 of copending Application No. 10/739,176 (Corresponding publication of the application, U.S. Pub. No. 2005/0134934). Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in the co-pending application 10/739,176, and the scopes of the independent claims 1, 19, 27 and 35 of the co-pending applicant contain every elements of the independent claims 1, 19, 27 and 35 of instant application, whereas the dependent claims in both the instant application and the co-pending application are *identical.* A detailed comparison of the claims languages presented in instant application and the co-pending application is illustrated as following.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims in Instant Examined Application	**Claims in Co-pending Application (commonly owned w. common inventors)**
1. A method of analyzing a printed image, comprising: scanning the printed image; **determining spatial characteristics of the printed image;** statistically analyzing the spatial characteristics of the printed image; determining spatial variations in the printed image based on the analyzed spatial characteristics; and determining an image marking process used to create the printed image based on the determined spatial variations in the printed image.	1. A method of analyzing a printed image, comprising: scanning the printed image; **generating an event map for one or more input data blocks in the scanned printed image; determining spatial characteristics of the printed image from at least the event map generated;** statistically analyzing the spatial characteristics of the printed image; determining spatial variations in the printed image based on the analyzed spatial characteristics; and determining an image marking process used to create the printed image based on the determined spatial variations in the printed image.
2. The method of claim 1, wherein spatial variations include local spatial variations of the scanned image data.	2. The method of claim 1, wherein spatial variations include local spatial variations of the scanned image data.
3. The method of claim 2, wherein a low value of the local spatial variation of the scanned image data is indicative of a photographic image marking process or background noise.	3. The method of claim 2, wherein a low value of the local spatial variation of the scanned image data is indicative of a photographic image marking process or background noise.
4. The method of claim 2, wherein a high value of the	4. The method of claim 2, wherein a high value of the

local spatial variation of the scanned image data is indicative of a halftone image marking process.	local spatial variation of the scanned image data is indicative of a halftone image marking process.
5. The method of claim 1, wherein spatial variations include at least one of dispersion and periodicity.	5. The method of claim 1, wherein spatial variations include at least one of dispersion and periodicity.
6. The method of claim 5, wherein a dispersed spatial variation of the scanned image data is indicative of an inkjet image marking process.	6. The method of claim 5, wherein a dispersed spatial variation of the scanned image data is indicative of an inkjet image marking process.
7. The method of claim 5, wherein a clustered spatial variation of the scanned image data is indicative of a xerographic image marking process or an offset image marking process.	7. The method of claim 5, wherein a clustered spatial variation of the scanned image data is indicative of a xerographic image marking process or an offset image marking process.
8. The method of claim 1, wherein spatial characteristics include at least one of halftone dot periodicity, halftone screen frequency and halftone screen noise.	8. The method of claim 1, wherein spatial characteristics include at least one of halftone dot periodicity, halftone screen frequency and halftone screen noise.
9. The method of claim 8, wherein a xerographic image marking process has low screen frequency and high screen noise characteristics.	9. The method of claim 8, wherein a xerographic image marking process has low screen frequency and high screen noise characteristics.
10. The method of claim 8, wherein an offset image marking process has high screen frequency and low screen noise characteristics.	10. The method of claim 8, wherein an offset image marking process has high screen frequency and low screen noise characteristics.
11. The method of claim 1, wherein scanning the printed image comprises dividing scanned printed image into image data blocks.	11. The method of claim 1, wherein scanning the printed image comprises dividing scanned printed image into image data blocks.
12. The method of claim 11, wherein scanning the printed image further comprises selecting one or more image data blocks.	12. The method of claim 11, wherein scanning the printed image further comprises selecting one or more image data blocks.
13. The method of claim 1, wherein determining an image marking process based on the determined spatial variations comprises determining at least one set of data statistic for the scanned printed image.	13. The method of claim 1, wherein determining an image marking process based on the determined spatial variations comprises determining at least one set of data statistic for the scanned printed image.
14. The method of claim 13, wherein determining at least one set of data statistic comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.	14. The method of claim 13, wherein determining at least one set of data statistic comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.
15. The method of claim 14, further comprising performing data evaluations using the determined one or more data statistics.	15. The method of claim 14, further comprising performing data evaluations using the determined one or more data statistics.
16. The method of claim 15, wherein performing data evaluations comprises one or more of determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.	16. The method of claim 15, wherein performing data evaluations comprises one or more of determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.
17. The method of claim 16, wherein determining an image marking process comprises determining the spatial variations using histogramming based on one or more determined data statistics.	17. The method of claim 16, wherein determining an image marking process comprises determining the spatial variations using histogramming based on one or more determined data statistics.

18. The method of claim 1, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.	18. The method of claim 1, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.
19. A method of determining an image marking process used to create a printed image, comprising: scanning the printed image; **determining spatial characteristics of the printed image;** statistically analyzing the spatial characteristics of the printed image; determining local spatial variations in the printed image based on the analyzed spatial characteristics; and determining the image marking process used to create the printed image based on the determined local spatial variations in the printed image.	19. A method of determining an image marking process used to create a printed image, comprising: scanning the printed image; **generating an event map for one or more input data blocks in the scanned printed image; determining spatial characteristics of the printed image from at least event map generated;** statistically analyzing the spatial characteristics of the printed image; determining local spatial variations in the printed image based on the analyzed spatial characteristics; and determining the image marking process used to create the printed image based on the determined local spatial variations in the printed image.
20. The method of claim 19, wherein local spatial variations include dispersion and periodicity.	20. The method of claim 19, wherein local spatial variations include dispersion and periodicity.
21. The method of claim 19, wherein spatial characteristics include halftone dot periodicity, halftone screen frequency and halftone screen noise.	21. The method of claim 19, wherein spatial characteristics include halftone dot periodicity, halftone screen frequency and halftone screen noise.
22. The method of claim 19, wherein determining an image marking process based on the determined local spatial variations comprises determining one or more data statistics for the scanned printed image.	22. The method of claim 19, wherein determining an image marking process based on the determined local spatial variations comprises determining one or more data statistics for the scanned printed image.
23. The method of claim 22, wherein determining one or more data statistics comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.	23. The method of claim 22, wherein determining one or more data statistics comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.
24. The method of claim 23 further comprising performing data evaluations using the determined one or more data statistics.	24. The method of claim 23 further comprising performing data evaluations using the determined one or more data statistics.
25. The method of claim 24, wherein performing data evaluations comprises one or more of: determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.	25. The method of claim 24, wherein performing data evaluations comprises one or more of: determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.
26. The method of claim 19, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.	26. The method of claim 19, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.
27. A machine-readable medium that provides instructions for determining an image marking process used to create a printed image, instructions, which when executed by a processor, cause the processor to perform operations comprising: scanning the printed image; **determining spatial characteristics of the printed image;** statistically analyzing the spatial characteristics of the printed image; determining local spatial variations	27. A machine-readable medium that provides instructions for determining an image marking process used to create a printed image, instructions, which when executed by a processor, cause the processor to perform operations comprising: scanning the printed image; **generating an event map for one or more input data blocks in the scanned printed image; determining spatial characteristics of the printed image from at**

in the printed image based on the analyzed spatial characteristics; and determining the image marking process used to create the printed image based on the determined local spatial variations in the printed image.	**least the event map generated;** statistically analyzing the spatial characteristics of the printed image; determining local spatial variations in the printed image based on the analyzed spatial characteristics; and determining the image marking process used to create the printed image based on the determined local spatial variations in the printed image.
28. The machine-readable medium according to claim 27, wherein local spatial variations include dispersion and periodicity.	28. The machine-readable medium according to claim 27, wherein local spatial variations include dispersion and periodicity.
29. The machine-readable medium according to claim 27, wherein spatial characteristics include halftone dot periodicity, halftone screen frequency and halftone screen noise.	29. The machine-readable medium according to claim 27, wherein spatial characteristics include halftone dot periodicity, halftone screen frequency and halftone screen noise.
30. The machine-readable medium according to claim 27, wherein determining an image marking process based on the determined local spatial variations comprises determining one or more data statistics for the scanned printed image.	30. The machine-readable medium according to claim 27, wherein determining an image marking process based on the determined local spatial variations comprises determining one or more data statistics for the scanned printed image.
31. The machine-readable medium according to claim 30, wherein ning one or more data statistics comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.	31. The machine-readable medium according to claim 30, wherein determining one or more data statistics comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.
32. The machine-readable medium according to claim 31 further comprising performing data evaluations using the determined one or more data statistics.	32. The machine-readable medium according to claim 31 further comprising performing data evaluations using the determined one or more data statistics.
33. The machine-readable medium according to claim 32, wherein performing data evaluations comprises one or more of: determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.	33. The machine-readable medium according to claim 32, wherein performing data evaluations comprises one or more of: determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.
34. The machine-readable medium according to claim 27, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.	34. The machine-readable medium according to claim 27, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.
35. A media/image marking process identification system for a printed page, comprising: a memory; and a media/image marking process identification determination circuit, routine or application that identifies at least one of a media type for the printed page or an image marking process used to process the printed page, **by processing the printed page to determine spatial characteristics of the printed image;** statistically analyzing the spatial characteristics of the printed image; and determining local spatial	35. A media/image marking process identification system for a printed page, comprising: a memory; and a media/image marking process identification determination circuit, routine or application that identifies at least one of a media type for the printed page or an image marking process used to process the printed page, **by processing the printed page to generate an event map for one or more input data blocks in the printed image, determine spatial characteristics of the printed image from at least the**

variations in the printed image based on the analyzed spatial characteristics.	**event map generated;** statistically analyzing the spatial characteristics of the printed image; and determining local spatial variations in the printed image based on the analyzed spatial characteristics.
36. The media/image marking process identification system according to claim 35, wherein local spatial variations include dispersion and periodicity.	36. The media/image marking process identification system according to claim 35, wherein local spatial variations include dispersion and periodicity.
37. The media/image marking process identification system according to claim 35, wherein spatial characteristics include halftone dot periodicity, halftone screen frequency and halftone screen noise.	37. The media/image marking process identification system according to claim 35, wherein spatial characteristics include halftone dot periodicity, halftone screen frequency and halftone screen noise.
38. The media/image marking process identification system according to claim 35, wherein determining an image marking process based on the determined local spatial variations comprises determining one or more data statistics for the scanned printed image.	38. The media/image marking process identification system according to claim 35, wherein determining an image marking process based on the determined local spatial variations comprises determining one or more data statistics for the scanned printed image.
39. The media/image marking process identification system according to claim 38, wherein determining one or more data statistics comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, min.sub.a of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.	39. The media/image marking process identification system according to claim 38, wherein determining one or more data statistics comprises determining one or more of an area average or mean of pixels in an image data block of the scanned printed image, an area variance of the pixels for the image data block, extreme minima value, mina, of the pixels for the image data block, extreme maxima value, max.sub.a, of the pixels for the image data block.
40. The media/image marking process identification system according to claim 39 further comprising performing data evaluations using the determined one or more data statistics.	40. The media/image marking process identification system according to claim 39 further comprising performing data evaluations using the determined one or more data statistics.
41. The media/image marking process identification system according to claim 40, wherein performing data evaluations comprises one or more of: determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.	41. The media/image marking process identification system according to claim 40, wherein performing data evaluations comprises one or more of: determining a ratio of the area variance to mean determined for a given block, calculating a distribution of the mean values for large pixel areas, comparing the calculated mean value to the determined min.sub.a and/or max.sub.a values, and determining a distance between maxima/minima.
42. The media/image marking process identification system according to claim 35, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.	42. The media/image marking process identification system according to claim 35, wherein determining an image marking process is used to set color attributes for storage, transmission, transformation or reproduction.

Claim Objections

6. **Claims 18, 26, 34 and 42** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent

form, or rewrite the claim(s) in independent form. Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. (See 37 CFR § 1.75(c))

7. **Claim 31** is objected to because of the following informalities: the word "ning" on Page 6, line 1 of the claims appears to be a typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1, 19, 27 and 35** are rejected under 35 U.S.C. 102(b) as being anticipated by **Sharma (U.S. Patent 6,353,675)**.

With regard to claim 1, the claim is drawn to a method of analyzing a printed image, comprising: scanning the printed image *(See Sharma, i.e. Column 5, lines 5-8)*; determining spatial characteristics of the printed image *(i.e. Column 5, lines 17-19)*; statistically analyzing the spatial characteristics of the printed image *(i.e. Column 5, lines 20-22)*; determining spatial variations in the printed image based on the analyzed spatial characteristics and determining an image marking process used to create the printed image based on the determined spatial variations in the printed image *(i.e. Column 5, lines 22-26)*.

With regard to claim 19, the claim is drawn to a method of determining an image marking process used to create a printed image, comprising: scanning the printed image *(See*

Sharma, i.e. Column 5, lines 5-8); determining spatial characteristics of the printed image *(i.e. Column 5, lines 17-19)*; statistically analyzing the spatial characteristics of the printed image *(i.e. Column 5, lines 20-22)*; determining local spatial variations in the printed image based on the analyzed spatial characteristics and determining the image marking process used to create the printed image based on the determined local spatial variations in the printed image *(i.e. Column 5, lines 22-26)*.

With regard to claim 27, the claim is drawn to a machine-readable medium that provides instructions for determining an image marking process used to create a printed image, instructions, which when executed by a processor, cause the processor to perform operations *(See Sharma, i.e. Column 4, lines 18-29)* comprising: scanning the printed image *(i.e. Column 5, lines 5-8)*; determining spatial characteristics of the printed image *(i.e. Column 5, lines 17-19)*; statistically analyzing the spatial characteristics of the printed image; determining local spatial variations in the printed image based on the analyzed spatial characteristics and determining the image marking process used to create the printed image based on the determined local spatial variations in the printed image *(i.e. Column 5, lines 22-26)*.

With regard to claim 35, the claim is drawn to a media/image marking process identification system *(See Sharma, i.e. Claim 10, "a marking process determining system")* for a printed page, comprising: a memory *(i.e. Column 3, line 32)*; and a media/image marking process identification determination circuit, routine or application that identifies at least one of a media type for the printed page or an image marking process used to process the printed page *(i.e. Column 5, lines 17-19)*, by processing the printed page to determine spatial characteristics of the printed image *(i.e. Column 5, lines 17-19)*; statistically analyzing the spatial characteristics of the

printed image; and determining local spatial variations in the printed image based on the analyzed spatial characteristics *(i.e. Column 5, lines 22-26)*.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. **Claims 1-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sharma (U.S. Patent No. 6,353,675)** as applied to claims 1, 19, 27 and 35 above, and further in view of **Wang (U.S. Patent No. 6,031,618)**.

With regard to claims 1-18, the claims are drawn to a method of analyzing image. Sharma discloses an invention relates to the method and apparatus that automatically identify the marking process (e.g. photographic, lithographic, ink-jet, line-on-line xerographic or rotated-screen xerographic) based on at least one spatial characteristic of the marked image *(See Sharma, i.e. Column 1, lines 41-48, Column 5, lines 5-32)*. Sharma further discloses the analysis of "power spectrum" (or power spectrum density function/spectral density function, or the amount of energy at each spatial/light frequency) by observing the attributes, such as the *existence, position, and/or color of special peaks* in the power spectrum *(column 1, 54-57);* Sharma further discloses the limitations of: detection of the lithographic marking process (or offset printing process) by examining "the specific screen frequencies" *(Column 2, lines 42);* detection of the xerographic marking process by examining "the spectral peaks" and "absence of color in the

spectral peaks" *(Column 2, lines 61-67);* detection of ink-jet marking process by examining "the rapid decrease in power and increase in frequency in the radial spatial frequency as results of " the error-diffusion halftones and stochastic screens" being commonly used in ink-jet printer *(Column 3, lines 9-25),* additionally, Sharma discloses that "other known or later developed spatial analyzing techniques, such as wavelet decomposition or the like, may also be used by the image spatial analyzer to determine the spatial characteristics *(Column 6, lines 2-6).* Sharma also disclose the automatic aspect of marking process detection system, which does not require information from the image spatial analyzer *(Column 6, line 13-17).* Sharma further discloses the limitations of determination of the color of the sensor cell of the detection process to be interpolated in consideration of the neighboring cells (*as "local" examination aspect, at least until the further limitation on the claim language) (Column 6, lines 28-32).*

Sharma does not *explicitly* disclose the limitations of determination of the marking process *based on the statistical data (such as: Average, Mean, Min, Max, Minima, Maxima) collected from the scanned printed image;* and the limitation of *setting the color attributes* based on the results of detecting the marking process.

However, Wang discloses the limitations of determination of the marking process based on the statistical data. Wang discloses the limitation of performing *statistical analysis,* which may include "*averaging the attribute values obtained from the scans, major rule, and the like" (See Wang, Column 5, lines 40-52);* Wang further discloses the limitation of correcting/setting/ *calibrating* using the correction values that are determined based on the attributes detected *(Column 6, lines 8-16).*

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have modified Sharma to include the limitations of determination of the marking process *based on the statistical data collected from the scanned printed image;* and the limitation of *setting the color attributes* based on the results of detecting the marking process taught by Wang. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified Sharma by the teachings of Wang to include the limitations of determination of the marking process *based on the statistical data collected from the scanned printed image;* and the limitation of *setting the color attributes* based on the results of detecting the marking process taught by Wang *for" more accurate reproduction of the article" to be performed (See "Summary of Invention", column 2, lines 55-56).*

With regard to claims 19-26, the claims are drawn to a method of determining an image marking process (used to create a printed image), comprising the identical limitations recited in claims 1, 5, 8, 13, 14, 15, 16 and 18 respectively, discussed above *(The claims are rejected under the same ground for at least the reasons set forth above. See the detailed discussion of the claims 1-18 above).*

With regard to claims 27-34, the claims are drawn to a machine-readable medium that provides instructions for determining an image marking process used to create a printed image, instructions, which when executed by a processor, cause the processor to perform operations, comprising the identical limitations recited in claims 19-26 respectively, discussed above. *(The claims are rejected under the same ground for at least the reasons set forth above. See the*

detailed discussion of the claims 1-26 *above. Furthermore,* Sharma, *discloses the limitation of* implementation of the system as computer software, *See i.e. Column* 4, *lines* 18-29*).*

With regard to claims 35-42, the claims are drawn to a media/image making process identification system for a printed page, comprising the identical limitations recited in claims 27-34 respectively, discussed above. *(The claims are rejected under the same ground for at least the reasons set forth above. See the detailed discussion of the claims* 1-34 *above).*

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Sharma et al. (U.S. Pub. No. 2004/0264768, XEROX) disclose methods and systems used to associate color calibration profiles with scanned images based on identifying the marking process used for an image on a substrate using spatial characteristics and/or color of the image.

B. Sharma et al. (U.S. Pub. No. 2004/0264769, XEROX) disclose methods and systems used to associate color calibration profiles with scanned images based on identifying the marking process used for an image on a substrate using spatial characteristics and/or color of image.

C. Sharma et al. (U.S. Pub. No. 2004/0264770, XEROX) disclose methods and systems used to associate color calibration profiles with scanned images based on identifying the marking process used for an image on a substrate using spatial characteristics and/or color of the image.

D. Sharma et al. (U.S. Pub. No. 2004/0264771, XEROX) disclose systems and methods for associating color profiles with a scanned input image using spatial attributes (characteristics).

E. Sharma et al. (U.S. Patent No. 6,525,845, XEROX) disclose a methods and apparatus for modifying image data based on identification of marking process.

F. Sharma (U.S. Patent No. 6,088,095, XEROX) discloses an invention relates to a model-based spectral calibration of color scanners.

G. Bala et al. (U.S. Pub, No. 2003/0168582, U.S. Patent No. 6,750,442, XEROX) disclose an invention relates to a scanner scans a medium containing a color image, and the spectrophotometric sensor interact with the scanner to aid in the automatic selection of a scanner color correction corresponding to the medium being scanned.

H. Bestmann (U.S. Patent No. 5,481,380) disclose a method and apparatus for calibration of color values.

I. Reuman (U.S. Patent No. 6,069,982) disclose an invention relates to estimation of spatial noise characteristics associated with an image acquired from an unknown image acquisition device.

J. Ueda et al. (U.S. Patent No. 6,008,812) disclose an image output characteristic setting device.

K. Uekusa et al. (U.S. Patent No. 6,791,711) disclose an invention relates to image processing method for performing color processing in accordance with a plurality of image objects based on the analyzed relationships between the objects.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacky X. Zheng whose telephone number is (571) 270-1122. The examiner can *normally* be reached on Monday-Friday, 7:30 a.m.-5p.m., Alt. Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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